

with a bluish tinge, coarsely and closely punctured, the interspaces rugulose.

*Chthoneis Grayi.*

*C. subelongata*, nigra, nitida, thorace pedibusque sordide fulvis, tibiis apice, tarsis femoribusque anticis dorso nigro-piceis; thorace transverso, lævi, utrinque foveolato; elytris cæruleo-nigris, fortiter et crebre punctatis, interspatiis rugulosis.

*Mas* thoracis margine antico medio sinuato; antennarum articulis duobus ultimis (ultimi apice excepto) sordide fulvis.

*Fœm.* thoracis margine antico medio non sinuato, antennarum articulis tribus ultimis sordide fulvis.

Long. 3-3½ lin.

*Hab.* Brazil, Constancia. Collected by Mr. Gray.

Vertex shining, impunctate, lower portion of front, together with the orbit of the eyes, finely strigose; encarpæ contiguous, transversely trigonate; carina narrowly wedged-shaped; antennæ much longer than the body in the ♂, not quite so long but exceeding the body in length in the ♀; the third joint shorter than the second, transverse and turbinate in the ♂; the second and third joints equal in length in the ♀, the intermediate joints rather less dilated in the latter sex. Thorax more than twice as broad as long; sides in the ♂ diverging from the base to far beyond the middle, then rounded and converging to the apex, the anterior angles thickened, obtuse; in the ♀ the sides are less dilated anteriorly and more regularly rounded; in the ♂ the apical margin is deeply sinuate in its middle third; in the ♀ it is regularly concave for its whole length; disk smooth and shining, impressed on either side with a deep fovea. Elytra sculptured as in *C. albicollis*.

[To be continued.]

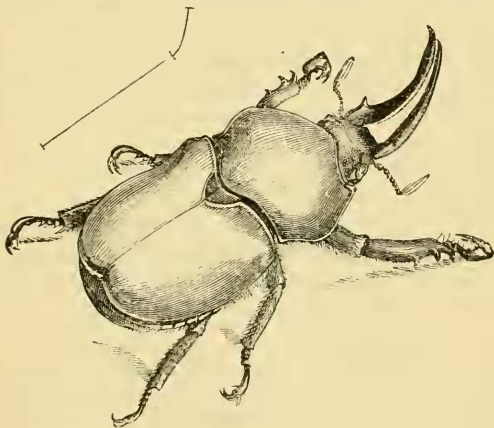
XLVII.—*Description of Didrepanephorus bifalcifer, the Type of a new Genus and Species of Rutelidæ, remarkable for the huge Sickle-shaped Mandibular Horns of the Males.* By J. WOOD-MASON, Deputy Superintendent, Indian Museum, Calcutta.

In a rich collection of insects formed amongst the hill-ranges of the N.E. frontier of India, and recently brought to this country by Mr. A. W. Chennell, of the Topographical Survey, I have detected an insect which introduces us to a perfectly novel feature in the morphology of the Lamellicorn beetles. Every

zoologist is familiar with the enormous horns which arise from the head or pronotum, and even from both these parts in the same species, in the males of so many members of this great family of Coleopterous insects; but no species have hitherto been described in which the mandibles are the seat of an analogous sexual distinction; nor, indeed, are any known in which these organs project beyond the head to any notable extent: "jamais elles ne dépassent notablement le chaperon en avant," remarks the great systematist\* of the Coleoptera, when discussing the mouth-parts of Lamellicornia in general. In this fine new insect, however, the apical one of the two teeth into which, in most of the true Rutelidæ, the extremity of the mandibles is externally divided, is enormously produced and curved forwards far in front of the head, much after the manner of the tusks in several extinct elephants. In *Peperonota Harringtonii*, Westw., its nearest ally, the secondary sexual characters of the males take a different form, the middle of the hinder margin of the pronotum being in this case produced backwards, upwards, and downwards into a huge decurved horn, the extremity of which is lodged in a depression of the suture of the elytra.

I beg to propose for this remarkable form the name of

*Didrepanephorus bifalcifer* †, gen. et sp. nov.



Body short and thick-set as in *Peperonota* and *Parastas a.* Integument brown, covered with a very short and moderately

\* Lacordaire, 'Gen. des Coléoptères,' t. ii. p. 51.

† From δι-, "two," et δρεπανηφόρος, "bearing a sickle" (ἄρμα δρεπανηφόρον, Xen. Anab. I. 10); and bi-, "two," et falcifer, "bearing a sickle."

dense, somewhat appressed, golden-brown pubescence with a plush-like lustre, especially on the pronotum, where in places it exhibits a tendency to become shaggy. Pronotum gibbous, its posterior margin strongly sinuous, its sides angulate-rotundate, and its anterior margin sinuous, with the lateral angles slightly produced and subacute. Scutellum moderate, broader than long, very slightly overlapped at base by the broadly rounded median lobe of the pronotum, longitudinally roof-shaped, its sides next the elytra very slightly arcuate. Elytra short, leaving the posterior half of the propygidium exposed, constructed much as in *Peperonota*, tolerably thickly but irregularly punctate \* between the hairs of the pubescence. Pygidium scarcely visible from above, very convex, its basal two thirds or thereabouts directed straight backwards, the remainder downwards. Abdomen with six visible ventral somites, of which the first four are very short and closely packed, together scarcely exceeding the fifth in length; the first three of them longitudinally somewhat roof-shaped and angularly emarginate in the middle of the hinder margin; the sixth with a rounded emargination in its posterior border, which is incompletely filled by the apex of the pygidium. Mesosternum simple. Prosternum with a slight postcoxal projection.

Fore legs short and very robust; the outer edge of the tibiæ strongly tridentate in characteristic Ruteline fashion; the terminal joint of the tarsi enlarged and strongly curved, with a large, blunt, dark brown tubercle on the inner concave curvature; the penultimate joint produced at the apex to a hard, blunt, dark brown point, against which the enlarged, sharp-edged, and simple outer unguis folds so as to form an efficient prehensile subchela. The four posterior legs much less robust, the intermediate pair as much inferior in robustness to the posterior as these are to the anterior; the outer unguis in all deeply cleft. On all the six femora, along the inner margins of the simple subcylindrical four posterior tibiæ, and at the free edges of the ventral thoracic somites, the pubescence is developed into long and shaggy light-brown hair.

\* Under a 3-inch objective the puncta show themselves as rather large and shallow oval depressions, in the middle of each of which is a small, dark brown papilla with a pore or pit at its summit. Can these perforated papillæ be the mouths of skin-glands, from which an offensive secretion is poured out as a defence?

Since the above was written, I have examined specimens (of both sexes in one case) of the two species of *Peperonota* represented in the national collection; and I find that the elytra in all exhibit a sculpture of the same kind, but differing in matters of detail according to species. In connexion with the above suggestion as to their possible, if not probable, nature, it is a significant fact that none of the papillæ give insertion to hairs.

Epicranium coarsely, irregularly, and not very thickly punctate, a pale brown hair springing from each pit. Clypeus unarmed, inclined to the rest of the head at an angle of about  $140^{\circ}$ , and limited off from it by a strong sinuous sutural impression, which is broadly concave forwards in the middle, and convex on each side above and behind the mandibles; it has the form of an inverted thick T ( $\perp$ ), the perpendicular stroke of which is disproportionately short and broad. Labrum salient, transverse, with its lower margin faintly roundly emarginate. The body of the mandibles is enlarged, and the part of them corresponding to the apical one of the two teeth into which, in most true Rutelidæ, their extremity is externally divided, is produced forwards and upwards into enormous, curved, sickle-shaped, horn-like processes, each of which is furnished near the base, on the upper and outer edge, with a short, sharp, and slightly upturned conical tooth, the representative of the basal of the two above-mentioned teeth in an ordinary Rutelide and of the prominent and recurved outer angle of the mandible in *Peperonota*. These huge mandibular horns are somewhat compressed and subtriangular, and taper gradually to a sharp point, approximating as they go; but they do not meet in the middle line, and are fully a millimetre apart at the apex; like the ungues and the tibial spines of the fore legs, they are of a rich dark (almost black) brown colour, and being, besides, smooth and polished, form a most effective contrast with the light golden brown of the body.

The other gnathites, so far as can be told without extracting them, differ in matters of detail only from those of such Ruteline forms as *Peperonota*, *Antichira*, &c.

*Measurements of the typical specimen.*

	millim.
Total length, measured between the fore margin of the clypeus and the most prominent part of the pygidium . . . . .	21
Length of the pronotum . . . . .	8
Width of ditto . . . . .	10
Length of the elytra . . . . .	11
Width of the conjoined elytra between the humeral angles . . . . .	10.25
Length of the mandibular horns along the convex curvature . . . . .	11
Length of the fore femora . . . . .	4.75
„ of the fore tibiæ . . . . .	5.5
„ of intermediate femora . . . . .	5.25
„ of intermediate tibiæ . . . . .	4.75
„ of posterior femora . . . . .	5.5

	millim.
Length of posterior tibiæ .....	4·5
Width of the head between the outer margin of the canthi of the eyes .....	5·5
Length of the clypeus. . . . .	2·5
"  of scutellum .....	2
Width of ditto at base .....	3
Length of antennal club. . . . .	2·25

Three specimens of this fine and remarkable addition to the Coleopterous fauna of India were discovered by Mr. M. J. Ogle, of the Topographical Survey of India, in one spot near Wakidgaon, a village 30–35 miles S.E. of Sadia, in the valley of the Noa Dehing, a feeder of the Brahmaputra. They do not differ from one another in the smallest particular, and, as each presents the same modification of the fore tarsi as that by which males are distinguished from females in such Rutelidæ as *Antichira lucida*, are doubtless all males.

A more detailed and formal description, with figures of the mouth-parts, is to be published hereafter elsewhere.

## MISCELLANEOUS.

### *The Nauplius Stage of Prawns.*

Blumenau, St. Catharina, Brazil.

Sept. 11, 1878.

MY DEAR SIR,—I duly received a few days ago, and heartily thank you for, a copy of your paper "On the *Nauplius* Stage of Prawns." As soon as I can find time to do so I shall discuss this question once more, though I am unable to give new facts; for I have been living far from the sea for more than eleven years.

I hope you received a copy of the German original, translated in the 'Annals,' which I sent you some months ago.

The main object of my writing you to-day is to beg you to compare the translation of my paper in the 'Annals' with the German original, in order to convince yourself that I did not use the word "opponents," which has been added by the translator. Indeed, "let my opponents tell me," is not a very exact translation of the words I used—"so sage man mir"\*. I, as well as you, have always thought

\* [The word "opponents" does not occur in the translation of Dr. Fritz Müller's paper published in this Journal for June 1878 (p. 484), but in Mr. Spence Bate's quoted translation of the same passage ('Annals,' July 1878, p. 80). To us the whole question of the expression used seems to be of little consequence: the people whom Dr. Müller asks to tell him something are those who hold an opinion opposed to his own; and if these are not "opponents," "so sage man uns" what they are.—Eds.]